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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,258	10/08/2003	Chin-Ping Li	BHT/3127-138	5668

7590 02/22/2008

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EXAMINER	
LAMB, CHRISTOPHER RAY	
ART UNIT	**PAPER NUMBER**
2627	
MAIL DATE	**DELIVERY MODE**
02/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/680,258	**Applicant(s)** LI, CHIN-PING	
	Examiner Christopher R. Lamb	**Art Unit** 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2007*.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-13* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *2-13* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 13, 2, 6, 7, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 6,643,240) in view of Saito et al. (JP 55-150150; see English-language abstract).

Regarding claim 13:

Chen discloses a method for changing access speed of an optical disk drive, comprising:

providing a first input port of a control circuit for changing the access speed of a motor, a button of the optical disk drive; pressing the button; and driving the motor to change the access speed of the optical disk drive (column 1, lines 38 to column 2, line 22: the signal from the eject key enters the first input port; the eject key is the button, and pressing it changes the speed).

Chen does not disclose:

an RC circuit connected to the control circuit; wherein the button is connected to the RC circuit, and pressing the button changes the potential of the first input port.

Saito discloses:

An RC circuit connected to a control circuit, wherein a button is connected to the RC circuit, and pressing the button changes the potential of the input port (abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Chen an RC circuit connected to a control circuit, wherein the button is connected to the RC circuit, and pressing the button changes the potential of the first input port.

The rationale is as follows:

Chen discloses a software system that controls two operation modes for one button.

Saito discloses that it is possible to control multiple operation modes for one button using RC circuits.

The motivation to combine references would have been to implement the switching control in hardware rather than software, simplifying the computer processing required.

Regarding claim 2:

In Chen in view of Saito the button is connected to a second input port of the control circuit (this is inherent: there must be one input port for the regular function and another for the timed function).

Regarding claim 6:

In Chen the button is the "retract" button (Fig. 1: the "retract" button of the Application is the "eject" button of Chen).

Regarding claims 7, 8, and 12:

All elements positively recited have already been identified with respect to earlier rejections ("pressing the button continuously" is disclosed in Chen column 1, line 38 to column 2, line 22; "reducing the potential of the first input port" is the direct result of an RC circuit connected to it). No further elaboration is necessary.

3. Claims 3-5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Saito, and further in view of applicant's admitted prior art.

Regarding claim 3:

Chen in view of Saito discloses a method for changing access speed of an optical disk drive as discussed above.

Chen in view of Saito does not expressly disclose "wherein the first input port is coupled with a capacitor and a resistor; one end of the capacitor is connected to ground, and the other end of the resistor is connected to the second input port."

In the previous Office Action, the Examiner took Official Notice that the simple RC timing circuit claimed is well known in the art. Although the applicant argued with the legal basis for the taking of Official Notice, the applicant did not dispute the fact that the RC timing circuit is well known, and therefore it is taken as admitted prior art. See MPEP 2144.03: "applicant must specifically point out...why the noticed fact is not considered to be common knowledge or well-known in the art."

It would have been obvious at the time the invention was made to one of ordinary skill in the art to use a circuit wherein the first input port is coupled with a capacitor and a resistor; one end of the capacitor is connected to ground, and the other end of the resistor is connected to the second input port since, as taught by applicant's admitted prior art.

The rationale is as follows:

Chen in view of Saito already discloses that an RC circuit is used to control the circuit's response to the button. One of ordinary skill in the art could definitely have combined the commonly known RC timing circuit with this disclosure with predictable results.

Regarding claims 4-5:

Chen in view of Saito discloses a method for changing access speed of an optical disk drive as discussed above.

Chen in view of Saito does not disclose "wherein the first input port is coupled with an input port of another button of the optical disk drive panel, and the another button is connected to the second input port of the control circuit" (claim 4), or "wherein said first input port is connected to the p-type end of a diode, the n-type end of the diode is connected to a capacitor and a resistor, the other end of the capacitor is connected to ground, and the other end of the resistor is connected to the second input port."

In the previous Office Action, the Examiner took Official Notice that the simple RC timing circuit claimed is well known in the art. Although the applicant argued with the legal basis for the taking of Official Notice, the applicant did not dispute the fact that the RC timing circuit is well known, and therefore it is taken as admitted prior art. See MPEP 2144.03: "applicant must specifically point out...why the noticed fact is not considered to be common knowledge or well-known in the art."

It would have been obvious at the time the invention was made to one of ordinary skill in the art to use a circuit where the first input port is coupled with an input port of another button of the optical disk drive panel, and the another button is connected to the second input port of the control circuit, wherein said first input port is connected to the p-type end of a diode, the n-type end of the diode is connected to a capacitor and a resistor, the other end of the capacitor is connected to ground, and the other end of the resistor is connected to the second input port, as taught by applicant's admitted prior art.

The rationale is as follows:

Chen in view of Saito already discloses that an RC circuit is used to control the circuit's response to the button. One of ordinary skill in the art could definitely have combined the commonly RC timing circuit with this disclosure with predictable results.

Regarding claims 9-11:

They are similar to claims 3-5 and are similarly rejected.

4. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Saito, and further in view of Nilson et al. (Electric Circuits, 6th ed.).

Regarding claim 3:

Chen in view of Saito discloses a method for changing access speed of an optical disk drive as discussed above.

Chen in view of Saito does not expressly disclose "wherein the first input port is coupled with a capacitor and a resistor; one end of the capacitor is connected to ground, and the other end of the resistor is connected to the second input port."

Nilson discloses the time response of an RC circuit (pages 286-288).

It would have been obvious to one of ordinary skill in the art to include in Chen in view of Saito wherein the first input port is coupled with a capacitor and a resistor; one end of the capacitor is connected to ground, and the other end of the resistor is connected to the second input port.

The rationale is as follows:

This extremely simple circuit follows directly from the basic principles of RC circuit time response.

Keep in mind that Chen in view of Saito already discloses that an RC circuit controls which function is selected, and that pressing the button once performs one function, and holding it down performs another. Also keep in mind that a minimum of two input ports are required to implement two functions.

If one function is triggered by pressing the button once, it is obvious to have that input port connected directly to the switch, so that pressing it triggers the function (this is the "second input port" of the claim).

If the other function is triggered by holding down the button, there must be some element in the circuit that changes potential over time.

Nilson discloses that in an RC circuit, a capacitor slowly discharges when a switch is opened. Since only this element changes potential over time, the second input port must somehow be based on the potential of the capacitor, and therefore the capacitor must be connected between the second input port and ground.

The location of the resistor is immaterial, but it must be in the circuit to create the correct response. Since the exact position has no impact on the circuit, is as obvious to put it between the two input ports as anywhere else in the circuit, as one of ordinary skill could easily have envisioned this placement and put it there with predictable results.

Regarding claim 9:

It is similar to claim 3 and similarly rejected.

Response to Arguments

5. Applicant's arguments filed March 14th, 2007 have been fully considered but for the most part they are not persuasive.

Applicant makes numerous arguments. Each will be addressed in turn.

Applicant first argues that by cancelling claim 1, adding new claim 13, and by amending claim 7 they have overcome the 35 USC 112, second paragraph, rejections in the previous Office Action. This argument is persuasive and those rejections have been withdrawn.

Next, regarding the taking of Official Notice, Applicant argues that "it is always incumbent upon the Examiner to find a reference to support a rejection," and therefore Applicant is not required to respond to the rejections of claims 3-5 and 8-10. However, in some circumstances the Examiner is permitted to rely upon "common knowledge" to reject a claim. Please see MPEP 2144.03. Applicant's general statements that the Examiner cannot take Official Notice do not constitute a proper traverse of the Examiner's taking of Official Notice, as noted in that section of the MPEP.

In this case, the inventive concept of Applicant's invention is an optical disc drive where the user can change the speed of a drive by holding down a button, and where pressing that button once performs a different function. The prior art, Chen, discloses exactly such a drive. Chen does not disclose the RC circuit, but Saito discloses the concept of using an RC circuit to control switch functions, and the specific circuit Applicant discloses is extremely obvious: the first embodiment is just a resistor, a capacitor, and a switch. To show how obvious this is, even though Applicant did not properly traverse the taking of Official Notice, the Examiner has provided an explanation in view of an introductory circuits textbook, as noted above.

Next, Applicant argues that Saito "fails to teach or suggest any applicability to optical drives, much less the suitability of the RC circuit to controlling the speed of an optical drive motor."

Chen is relied upon to teach controlling the speed of an optical drive motor. Saito is only relied upon to teach that buttons for an apparatus can be implemented using an RC circuit. The specific apparatus of Saito is a tape player: considering that both tapes and optical discs are dynamic storage media (both commonly used for storing, e.g., music) and have similar control buttons (play, rewind, fast-forward, eject, etc.), they are certainly analogous art.

Applicant next argues that the combination fails to suggest the claimed subject matter. However, the teaching for each claim limitation has been identified in the rejections above. Applicant does not pointed out any specific errors in the Examiner's analysis.

Applicant next argues that there is no motivation to combine Chen and Saito. However, the Examiner provided a motivation in the rejection.

In any case, one of ordinary skill certainly could have combined the teachings of Chen and Saito with predictable results, especially considering that in this case the teaching of Saito is just that an RC circuit can be used to implement switch controls in a circuit, and RC circuits are the most fundamental and basic element in all of electrical engineering.

Applicant next argues that Chen "teaches away" from the combination by stating that buttons are "inconvenient." Just because Chen discloses an embodiment without buttons does not mean that it is any less obvious to combine the embodiment of Chen with buttons with the disclosure that RC circuits can be used to implement buttons.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (571)

272-5264. The examiner can normally be reached on 9:00 AM to 6:30 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 2/15/08

THANG V. TRAN
PRIMARY EXAMINER